LoopStar® Metro 3600

SONET Multi-Service Transmission Platform

The LoopStar® Metro 3600 is an advanced, next-generation SONET multi-service transmission platform that allows service providers to cost-effectively aggregate, deploy, and manage TDM and Ethernet services. With its compact design and ability to scale from an OC-3 to an OC-192 network, the Metro 3600 provides a low-cost, high-growth solution for adding services at the central office or at the edge of the network.

When used with the LoopStar 800, LoopStar 810, or LoopStar 1600 products, the Metro 3600 provides a cost-effective aggregation point for multiple subtending rings. The Metro 3600 also can function as multiple virtual Add-Drop Multiplexers (ADMs) for hub node applications. In addition, with its versatile cross-connect architecture and high port count, this platform is an efficient alternative to existing cross-connect systems that require significantly more rack space at two to three times the cost.

SPEC SHEET

Benefits:

- Aggregates and delivers TDM and Ethernet services over a single transport platform.
- Provides efficient support for point-to-point, point-to-multipoint, or multipoint-to-multipoint traffic.
- Supports network interfaces from an OC-3 to OC-192 and tributary interfaces from OC-3 to OC-48.
- Scales Ethernet services from sub10BaseT rates up to Gigabit Ethernet using QoS in conjunction with EoS features.
- Offers modular slot design to grow the network cost-effectively and add services when required.
- Provides multiple network protection schemes including UPSR, BLSR, and LAPS.
- Prevents tributary card failures from affecting customer traffic with economical n:1 tributary card protection.
- Protects equipment (cross-connections and management) with redundant cross-connect and management cards.
- Reduces CAPEX by providing MADM and 3/1 DACS functionality in a single platform.
- Provides sufficient traffic grooming capabilities to reduce the need for costly DACs ports.
- Utilizes the same management systems as those for the LoopStar 800/810/1600: LoopStar SONET EMS, LoopStar SONET Web-based LCT.

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Features and Benefits

- Software selectable network protection offers support for UPSR, BLSR, or Linear 1+1 (LAPS)
- EoS (GFP, low order VCAT, and LCAS) allows for more efficient use of SONET bandwidth without affecting the existing infrastructure
- VLAN support with 802.1Q-in-Q allows for transparent transport of customer VLANs, simplifying the management of customer Ethernet traffic
- Supports the following Ethernet business services: EPL, EVPL, EPLAN, EVPLAN
- M13 and transmux support enables efficient use of network resources without sacrificing traffic routing capabilities
- High-density support for DS1, DS3, OC-3, OC-12 and OC-48 tributaries provides a cost-effective aggregation point for access networks and metro networks
- Flexible n:1 protection for DSn interfaces promotes further operational cost savings
- 8 RU design for central office deployments
- Low power consumption (350W typical) saves on operation expenses
- Cross-connect matrix and management function is provided on one integrated card, reducing both capital and operational expenses
- Most tributary cards are interchangeable with the LoopStar 800/1600, reducing spare inventory

Space-Saving Design

The compact 8 RU (14" x 17.2" x 13.8") LoopStar Metro 3600 allows for ease of installation in tight rack spaces in central office environments.

Line Card Options:

- Two card slots for management, control and cross-connect functionality. One slot for auxiliary alarm unit.
- Fourteen service interface slots for network or tributary card use: OC-192, OC-48, OC-12, OC-3, DS3, DS1, 10/100, 100FX or Gig-E
- OC-3 line card options for 1, 2, 4, or 8 ports
- OC-12 line card options for 1, 2, or 4 ports
- All optical interfaces support UPSR, BLSR, or LAPS configurations
- Flexible DS1 and DS3 protection switching schemes, 1:4 for DS1 and 1:3 for DS3 or 1:1 for DS1 and 1:1 for DS3
- DS1 line card for 28 ports
- DS3 line card options for 6 or 12 ports
- Multiple Input/Output back-plane panels for DS1 and DS3 line card options (DS1 only, DS3 only, or DS1 and DS3 combo)
- Ethernet line card options for 8 port 10/100BT, 2 port Gig-E, or a combination of 4 port 10/100 with 1 port Gig-E
- BITS and loop timing options for redundancy

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Ordering Information

LoopStar Metro 3600 chassis assembly	LPS-FRM3600-L1
3600 groupware for 19"/23" frame installation, fiber management, brackets, rear cover and door	LPS-3600-OFI
Cross-connect and system control and timing board (35G STSI/5G VT1.5)	LPS-GXCS01-L1
Cross-connect and system control and timing board (80G STSI/20G VT1.5)	LPS-EXCS01-L1
LoopStar metro 3600 system auxillary board	LPS-AUX-L1
OC-192 optical interface unit (IR-2, LC) 40km	LPS-OC19202
OC-192 optical interface unit (LS-64.2, LC) 80km, without BA	LPS-OC19203
OC-192 optical interface unit (40 wavelength, 100G, G.692)	LPS-OC192W
OC-48 optical interface unit	LPS-OC480x
OC-48 optical interface unit (SR-1, LC)	LPS-OC4804
OC-48 optical interface unit (IR-2, LC)	LPS-OC4805
OC-48 optical interface unit (100KM, LC)	LPS-OC4806
OC-48 optical interface unit (40 wavelength, 100G, G.692, 170KM)	LPS-OC48W01*
OC-48 optical interface unit (40 wavelength, 100G, G.692, 640KM)	LPS-OC48W02*
4xOC-12 optical interface unit	LPS-OC12Q0x
4xOC-12 optical interface unit configurable	LPS-OC12QAz
2xOC-12 optical interface unit	LPS-OC12D0x
OC-12 optical interface unit	LPS-OC120x
8xOC-3 optical unit	LPS-OC30z
4xOC-3 optical interface unit	LPS-OC3Q0x
2xOC-3 optical interface unit	LPS-OC3D0x
OC-3 optical interface unit	LPS-OC30x
2x1000Base-FX ethernet board (transparent, without GE SFP module)	LPS-EGT2z
8x100Base-T ethernet board	LPS-EFS8
28xDS-1 mapper board	LPS-PDT102
28xDS1 mapper protection	LPS-PDT1P02
6xDS-3 mapper board (transmux)	LPS-PDM3
6 port DS3 transmux/remote test protection unit	LPS-PDM3P01
12xDS3/STS1 mapper unit	LPS-PQT3A01
12xDS-3 mapper board	LPS-PQT302
12xDS3 mapper protection	LPS-PQT3P01
12xDS3/STS1 mapper protection unit	LPS-PQT3B
Faceplate front (for XCS slot)	LPS-XFF
56xDS1 electrical interface board (right side)	LPS-PQI1R
56xDS1 electrical interface board (left side)	LPS-PQI1L
48xDS3 electrical interface board (BNC – left side)	LPS-PHI3A
48xDS3 electrical interface board (BNC – right side)	LPS-PHI3B
48xDS3 electrical interface board (MINI-BNC – left side)	LPS-PHI13C
48xDS3 electrical interface board (MINI BNC – right side)	LPS-PHI13D
Faceplate rear for 3600	LPS-BFA

Note: x = 1, 2, 3 (where 1 = 15 km, 2 = 40 km, 3 = 60 km)
z = requires SFPs

*Contact customer service for correct part numbers for SFP and specific wavelengths

12/06 • 103873AE LoopStar® Metro 3600

SPEC SHEET

Specifications

Cross-connect capabilites:	768 x 768, 1920 x 1920 STS-1 2688 x 2688, 10752 x 10752 VT1.5
Interface capacities	
TDM:	224 x DS1/Shelf 96/192 x DS3/Shelf
SONET:	56/112 x OC-3/Shelf 32/56 x OC-12/Shelf 6/14 x OC-48/Shelf 2/6 x OC-192/Shelf
Ethernet:	96 x 10/100 Mbps Ethernet/Shelf 24 x Gigabit Ethernet/Shelf
Networking Topologies:	Terminal Linear ADM Ring and multi-ring Mesh
Service Protection:	Linear-APS UPSR, BLSR (Optional) DNI (Dual Node Interconnection) FSVP (Fiber Shared virtual path protection)
Equipment Protection:	1 + 1 protection of cross-connect, system control and timing Dual Power feeds 1: N(N≤ 4) DS1 protection 1: N(N≤ 4) DS3 protection
Network Management:	TL1, Web-based LCT SNMP LoopStar Element Management System IP DCC and 4 layer OSI over DCC
Ethernet Features:	HDLC/X.86/GFP encapsulation STS-1 & VT1.5 VCAT, LCAS, 802.1Q VLAN/QinQ L2 switching with STP/RSTP, MPLS VPN
Power Consumption:	600W (maxiumum load configuration) <350W (typical)
PHYSICAL	
Dimension (HxWxD):	8RU (14" x 17.2" x 13.8")
Weight:	<124 lbs (55 kg) (full configuration)
Operating Temperature:	23 °F to 131 °F (-5 °C to 55 °C)
Operating Humidity:	5% to 95%
Standards Compliances:	NEBS Level 3 Certified Telcordia GR-253, GR-1089 and GR-63 UL 60950

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